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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,378	03/24/2004	Noriyuki Tamura	SNY-053	3329

20374 7590 02/13/2009

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EXAMINER	
HODGE, ROBERT W	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
02/13/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,378	TAMURA ET AL.	
	Examiner	Art Unit	
	ROBERT HODGE	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *17-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 8/14/08 have been fully considered but they are not persuasive. Applicants state that the Examiner's understanding of the instant claims is incorrect and that the "range of state of charge" is actually charging – not discharging. Said argument is completely contradictory to the recitation in the instant claims. Claim 1 recites in lines 5 & 6 "comprising charging and **discharging** the battery within a range of state of charge". Applicants further state that the charging of the battery is less than 100% and then fully discharged to 100% according to instant claim 1. However this argument is not commensurate in scope with instant claim 1, there is nothing in claim 1 that even remotely recites applicants' argument. Furthermore in applicants cycle test disclosed in the instant specification the battery is being charged to 100% (see paragraph [0033] "capacity is 100% when charge is completed") and therefore said argument is not entirely commensurate with the instant specification. Applicants further argue many other limitations that are not present in the instant claims and therefore these arguments are also not commensurate in scope with the claims. Examination on the merits is based on the claims read in light of the specification but not reading limitations from the specification into the claims as well as giving the terms of the claims their broadest most reasonable interpretation. Therefore if applicants would like certain limitations to be considered for examination on the merits applicants are invited to add said limitations to the instant claims. Applicants also state that by operating the battery of Fujimoto by the method of Odaohhara a silicon lithium compound will be formed.

However applicants have provided no evidence to support this allegation. The burden was shifted to applicants in the previous office action to prove with **evidence** (not arguments) that the battery of Fujimoto as operated by Odaohhara's method does not meet the limitations of the instant claims said burden has not been met.

Conclusory statements are not probative unless supported by facts. See Ex parte Gray 10 USPQ 2d 1922 (BPAI 1989); In re de Blauwe 222 USPQ 191, 196 (Fed. Cir. 1984); In re D'Ancicco 172 USPQ 241 (CCPA 1972); In re Grunwell 203 USPQ 1055 (CCPA 1979); Meitzner v. Mindick 193 USPQ 17; In re Brandstandter 179 USPQ 286, 294 (CCPA 1973); In re Lindner 173 USPQ 356; and In re Smith 74 USPQ 207.

As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith. In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/31720 with the now provided Official English translation hereinafter Fujimoto in view of U.S. Pre-Grant Publication No. 2002/0144160 hereinafter Odaohhara.

As per the Official English translation Fujimoto teaches a lithium secondary battery that has a negative electrode having an active material layer of amorphous

silicon deposited on a copper current collector through a deposition process and the amorphous silicon is a thin layer and a binder is included in the active material layer (page 6, line 11 – page 8, line 11 and Experiments 1 and 2).

Fujimoto does not teach a method of charging and discharging the lithium secondary battery within a range of state of charge.

Odaohhara teaches a method of charging and discharging lithium ion batteries such that the battery is only partially discharged before it is subsequently charged. Odaohhara recognizes that by only partially discharging the battery and then subsequently charging the battery versus fully discharging the battery and subsequently charging, the battery that was partially discharged will retain a higher discharge capacity longer over the cycle life versus the battery that was fully discharged. Odaohhara further recognizes that the best conditions for a partial discharge are a 30% discharge and a 50% discharge (figure 9 and paragraphs [0020]-[0022]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to partially discharge the battery of Fujimoto before subsequently charging it as taught by Odaohhara in order to maintain a higher discharge capacity of the battery over the cycle life of the battery thus increasing its useful life.

The Examiner notes that the best understanding of the recitation of "range of state of charge" from the claim and instant specification is that the battery is partially discharged before charging. With regards to the recitations in claims 1 and 3-12 reciting that no peak related to a silicon lithium compound from X-ray diffraction is observed or no peak between a range of 18-28° is observed (which relates to the area that a silicon

lithium compound would be observed), it is the Examiner's position that because Odaohhara is partially discharging the battery and not fully discharging the battery, a silicon lithium compound will not be formed and by the combination of Fujimoto and Odaohhara the battery of Fujimoto operated by Odaohhara's method will also not form a silicon lithium compound. Therefore the burden is shifted to applicants to prove that the battery of Fujimoto as operated by Odaohhara's method does not meet the limitations of the instant claims by a showing of evidence and not arguments.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. H./
Examiner, Art Unit 1795

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795